

What Is Claimed Is:

1. A door closer which is fabricated in a hydraulic or air cylinder shape in its body,
wherein a subsidiary plate 9a with a subsidiary pin 9b is assembled to a door
5 mounting device 9 installed at a door 10, and a force adjustment nut 7, which is rotatable
to right or left side, is assembled to the subsidiary plate 9a so that it can change the
position of a piston rod 3 to the door 10 or to a doorframe 11;

wherein a cylinder 1 is assembled to a doorframe mounting device 8 installed at
the doorframe 11, a surface of the cylinder 1 being provided with hemi-cylindrical shaped
10 protrusions, in which an oil-hole is formed and a speed adjustment bolt is assembled at
end thereof, extending linearly in the longitudinal direction, a piston 2, and a spring 5 is
mounted in the cylinder 1 and hydraulic oil containing a little amounts of air is filled in
the cylinder 1, the piston rod 3 is extending from an inner side to an outer side of the
cylinder 1, one end of the piston rod 3 being provided with the piston 2 and the other end
15 thereof being provided with male screw 3a in which minor diameter of an external thread
is greater than a diameter of the piston rod 3; and

wherein the door mounting device 9 including the force adjustment nut 7,
subsidiary plate 9a and subsidiary pin 9b, and the doorframe mounting device 8 including
the cylinder 1, the piston rod 3 and the male screw 3a, can be assembled and separated
20 from each other by the force adjustment nut 7 provided at the door mounting device 9,
and the male screw 3a provided at the one end of the piston rod 3.

2. The door closer of claim 1, wherein an additional supporter 8a of a rectangular
shape can be, if needed, provided at lower surface of the doorframe mounting device 8, a
25 longitudinal and transverse length thereof being identical with those of the lower surface
of the doorframe mounting device 8, and holes corresponding to screw holes formed at
lower surface of the doorframe mounting device 8 is formed at the additional supporter
8a so as to fix the doorframe mounting device 8 to the doorframe 11, with forming an
additional central hole in the supporter 8a for assembling with the doorframe mounting
30 device 8.

3. The door closer of claim 2, wherein the additional supporter 8a is made of materials selected from plastic group.

4. The door closer of claim 1, wherein the piston 2 is provided with a hole 2a and is connected to one end of the piston rod 3, an catch rod 2a' being formed at the hole 2a and a ball 2b is received therein, and the male screw 3a is formed or attached to other end of the piston rod 3 so that the piston rod 3 can be moved in the force adjustment nut 7, the minor diameter of an external thread being greater than the diameter of the piston rod 3.

5. The door closer of claim 1, wherein the force adjustment nut 7 is exposed to outside to make it easy to mount and control force, an female screw being formed at inside of the force adjustment nut 7 so that the piston rod 3 can be moved in the force adjustment nut 7, the minor diameter of the internal thread being greater than the diameter of the piston rod 3, and in addition, the force adjustment nut 7 has a cylindrical shape with a big central through-hole extending therethrough, one end of it being blocked by a round plate with a small central through-hole.